Oyster Restoration Tributary Selection

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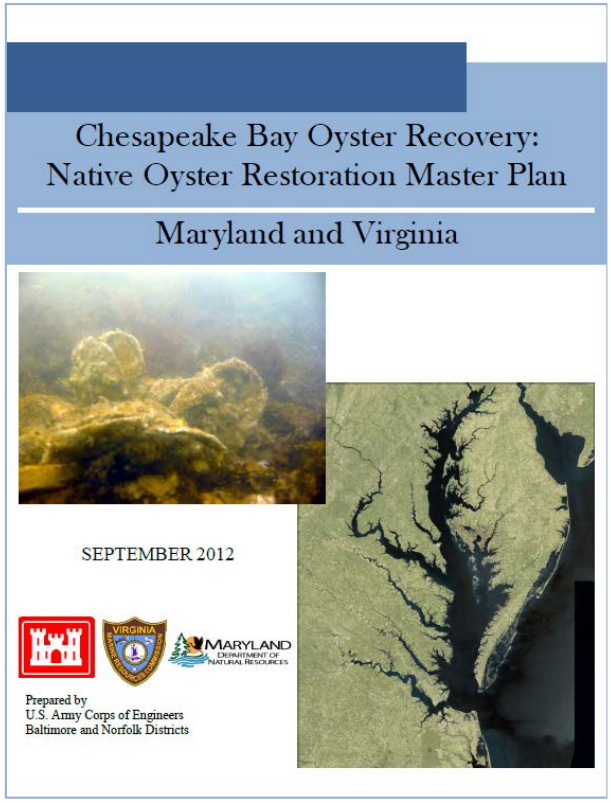
Shellfish Program, Maryland DNR

First Three Tributaries

Criteria Used To Select Previous Restoration Tributaries

USACE Native Oyster Restoration Master Plan



1. Salinity (12-14 ppt)
2. Dissolved oxygen (≥5 mg/l summer)
3. Depth (<20 ft)
4. Potential for larval retention
5. Presence of historic oyster bars
6. Historic spat set

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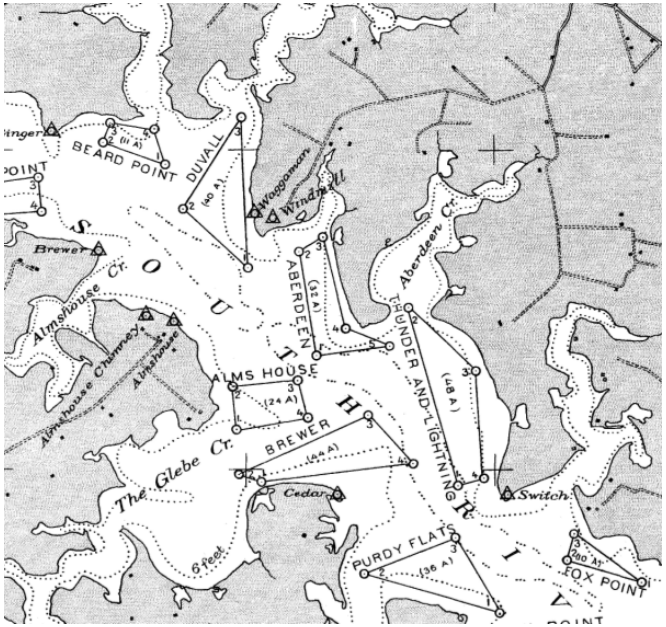
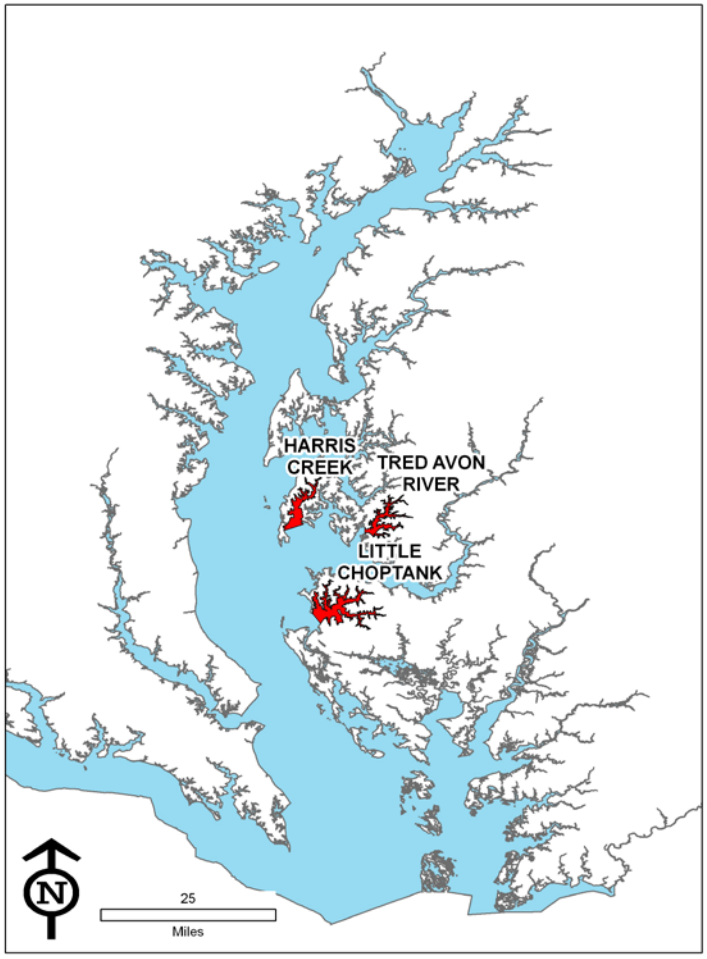
Additional Criteria



1. Sanctuary status
2. Amount of restorable bottom >8% of historic bottom
3. Meaningful but tractable size (creeks and small rivers, 3.861-200 square miles)

First Three Tributaries

- Harris Creek
- Little Choptank River
- Tred Avon River



Process for Next Two Tributaries

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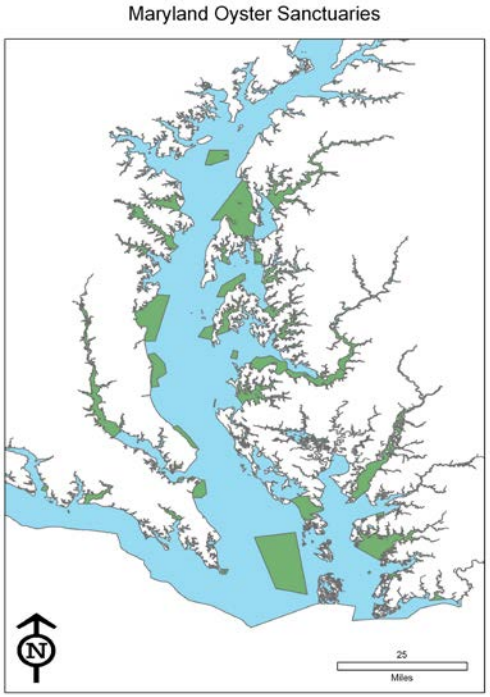
Requests from Secretary Belton



A. Not in the middle Eastern Shore

B. Requires little investment to meet restoration goals (areas needing little substrate and/or spat)

C. Area already a sanctuary

Process for Next Two Tributaries

Oyster Advisory Commission ranks selection criteria

Amount of Hard Bottom	17
Historic Spat Set	11
Potential of Larval Retention	8
NEPA Approved	5
Enforceability	4
MDE Restricted Area	3
Salinity	2
Geographical Placement	2
Current Oyster Density	2
Other Tributary Uses	2
Dissolved Oxygen	1
Proximity to Fished Areas	1
Depth	0
Historic Disease/Mortality	0
Surrounding Land Use	0

Process for Next Two Tributaries

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DNR provides OAC with data on sanctuaries based on their selected criteria

Sanctuary	Acres: Total / Historic Oyster Bottom	Salinity Category	Overall OAC Criteria Ranking Importance																
			1	2	3		4	5	6	7		8		9	10		11	12	13	14	15
			Amount of Hard Bottom to Restore (Acres)	Historic Spat Set	Potential of Larval Retention		NEPA Approved	Enforce-ability	MDE Restricted Area	Salinity		Geographical Placement		Current Oyster Density	Other Tributary Uses		Dissolved Oxygen	Proximity to PSFA	Depth	Historic Disease / Mortality	Primary Surrounding Landuse
					"Sink"	"Source"				Reprod-uction	Disease	Distance from 1st three tribs	Different salinity zones then 1st 3 tribs		Other Commerical Fisheries	Boating					
Big Annemessex	749 / 361	high	0	ND	Med	Med	No	High	Partially	High	High	Far	Yes	ND			Good	High	Suitable	ND	Natural
Breton Bay	3,212 / 888	low	311	Low			No	High	Partially	Low	Low	Far	No	ND			Med	High	Suitable	Med	Agriculture
Calvert Shore	2,214 / 673	med	196	Low	Med	Med	No	Med	No	Med	Med	Med	Yes	0.1			Good	Low	Suitable	Low	Natural
Cedar Point	3,473 / 2,839	med	241	ND	Med	Med	No	Med	Partially	Med	Med	Far	Yes	0.05			Good	High	Suitable	ND	Developed
Chester ORA	6,189 / 184	low	460	Low	Med	Med	Yes	High	No	Low	Low	Far	No	0.08			Good	High	Suitable	Low	Agriculture
Choptank ORA	8,962 / 236	low	142	Low	High	Low	Yes	High	Yes	Low	Low	Close	No	11.5			Med	High	Suitable	Low	Agriculture
Cook Point	814 / 781	med	256	Low	High	Low	Yes	Low	No	Med	Med	Close	Yes	ND			Good	High	Parts Suitable	Low	Natural
Cox Creek	2,112 / 939	low	105	Med			No	High	No	Low	Low	Med	No	0.64			Good	High	Suitable	Med	Agriculture
Eastern Bay	4,521 / 939	low	245	Med	High	Low	No	Low	No	Low	Low	Med	No	0.53			Good	High	Parts Suitable	Low	Agriculture
Fort Carroll	30 / 0	low	0	ND			No	Low	Yes	Low	Low	Far	No	ND			Poor	Low	Suitable	ND	Developed
Herring Bay	16,792 / 7,981	low	5357	Low	Med	Med	No	Med	No	Low	Low	Med	No	0			Good	High	Suitable	Low	Developed
Hooper Straight	7,307 / 5,317	high	748	High			No	Med	No	High	High	Far	Yes	1.03			Good	High	Parts Suitable	Low	Natural
Howell Point	6 / 6	low	2	ND			Yes	Low	No	Low	Low	Close	No	ND			Good	High	Suitable	ND	Natural
Kitts Creek	1,181 / 95	med	499	Low			No	High	No	Med	Med	Far	Yes	ND			Good	Low	Suitable	Low	Natural
La Trappe Creek	377 / 13	low	6	ND			Yes	High	Partially	Low	Low	Close	No	ND			Good	High	Suitable	ND	Agriculture
Lower Chester	24,147 / 6,930	low	5880	Low	High	Low	Yes	Med	No	Low	Low	Far	No	0.07			Good	High	Suitable	Low	Agriculture
Lower Choptank	7,172 / 4,217	low	531	Low	High	Low	Yes	Med	No	Low	Low	Close	No	1.58			Good	High	Suitable	Low	Agriculture
Lower Mainstem	38,290 / 8,234	med	3603	High	Med	Med	No	Med	No	Med	Med	Far	Yes	0.22			Good	High	Unsuitable	Med	Natural
Lower Patuxent	335 / 315	med	33	ND	Med	Med	Yes	Low	No	Med	Med	Med	Yes	1.38			Med	High	Unsuitable	ND	Developed
Magothy River	5,607 / 230	low	544	ND	Med	Med	Yes	High	Partially	Low	Low	Far	No	ND			Good	High	Suitable	ND	Developed
Man O' War / Gales Lump	4,704 / 2,310	low	3256	ND	Low	High	No	Med	No	Low	Low	Far	No	0.01			Good	High	Suitable	ND	Agriculture
Manokin	16,320 / 11,040	high	508	Med	High	Low	No	High	Partially	High	High	Far	Yes	9.67			Good	High	Suitable	Low	Natural
Miles River	3,449 / 373	low	103	Low			No	High	No	Low	Low	Med	No	0.04			Med	High	Suitable	Low	Agriculture
Mill Hill	295 / 188	low	39	Med	High	Low	No	Low	No	Low	Low	Med	No	1.65			Good	High	Suitable	Low	Developed
Nanticoke River	16,699 / 576	low	718	Low	Med	Med	Yes	High	Partially	Low	Low	Far	No	ND			Good	High	Suitable	Low	Natural
Neal Addition	7 / 7	low	4	Low			Yes	Low	No	Low	Low	Med	No	ND			Med	High	Suitable	Low	Agriculture
Oxford Lab	36 / 3	low	1	ND	High	Low	Yes	Low	No	Low	Low	Close	No	ND			Good	High	Suitable	ND	Developed
Piney Point	13 / 0	low	0	ND			No	Low	No	Low	Low	Far	No	ND			Poor	Med	Suitable	ND	Natural
Plum Point	6,209 / 4,405	med	1532	ND	Med	Med	No	Med	No	Med	Med	Med	Yes	ND			Med	Low	Suitable	ND	Natural
Point Lookout	399 / 396	med	155	Low	Med	Med	No	Low	No	Med	Med	Far	Yes	1.82			Good	High	Suitable	Low	Natural
Poplar Island	7 / 7	low	1	ND	Med	Med	No	Low	No	Low	Low	Med	No	ND			Good	High	Suitable	ND	Natural
Prospect Bay	1,478 / 1,061	low	81	Low	High	Low	No	Low	No	Low	Low	Med	No	0.68			Good	High	Suitable	Low	Agriculture
Prospect Bay - Cabin Creek	298 / 128	low	0	ND	High	Low	No	Low	No	Low	Low	Med	No	0.68			Good	High	Suitable	ND	Natural

Process for Next Two Tributaries

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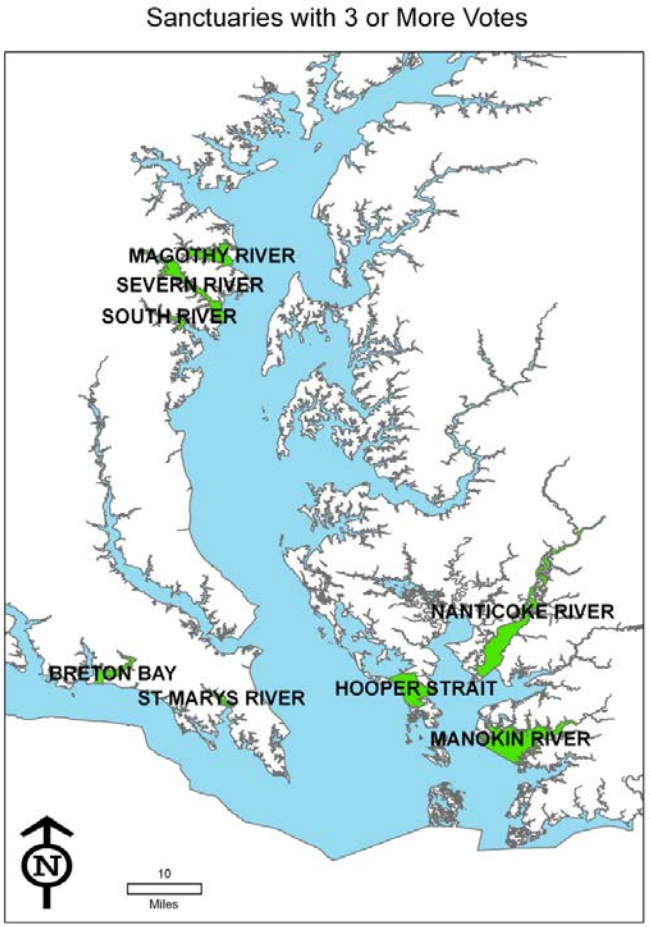
OAC Narrows Tributaries for Consideration

Sanctuary	Votes For	Votes Against
MANOKIN RIVER	9	3
BRETON BAY	9	0
ST MARYS RIVER	8	5
HOOPER STRAIT	8	2
NANTICOKE RIVER	7	2
MAGOTHY RIVER	6	2
SEVERN RIVER	3	3
SOUTH RIVER	3	1



Process for Next Two Tributaries

- OAC may refine recommendations
- Consultation with restoration partners
- Public outreach

Photo by Steve Allen